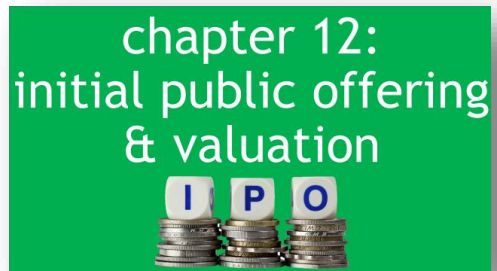
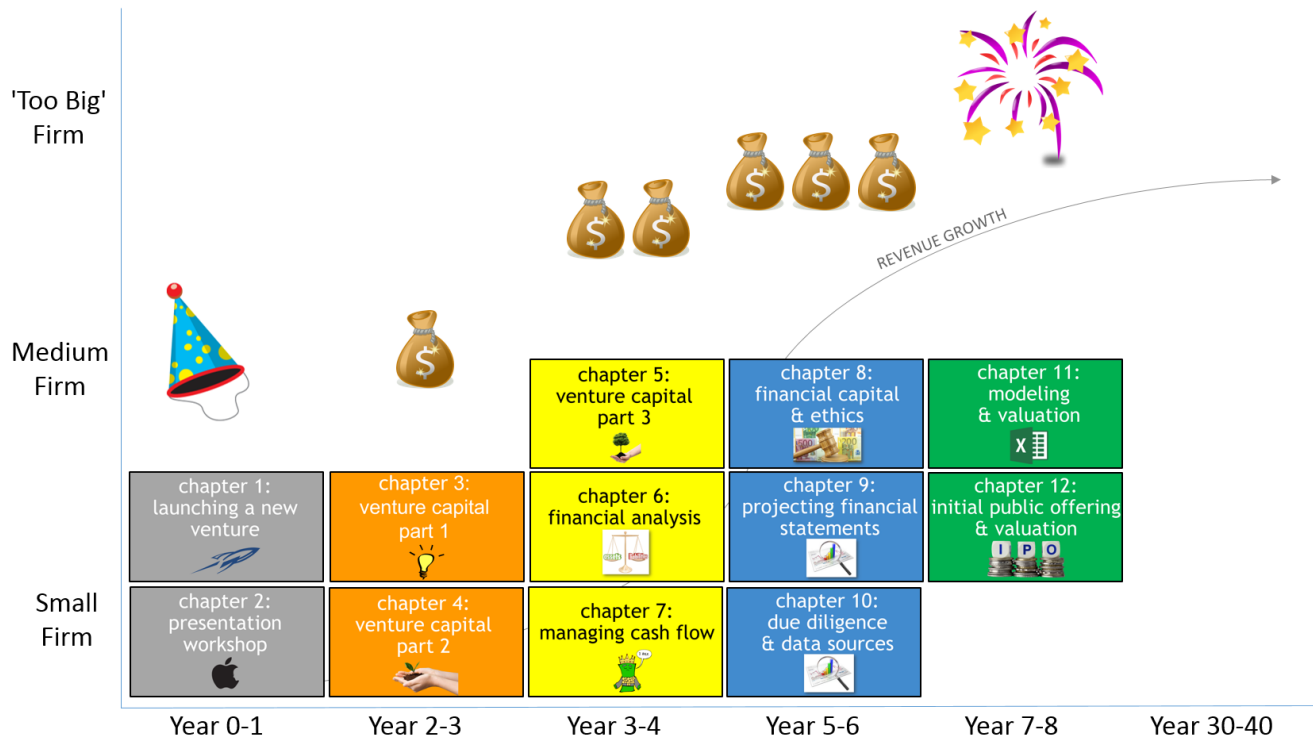
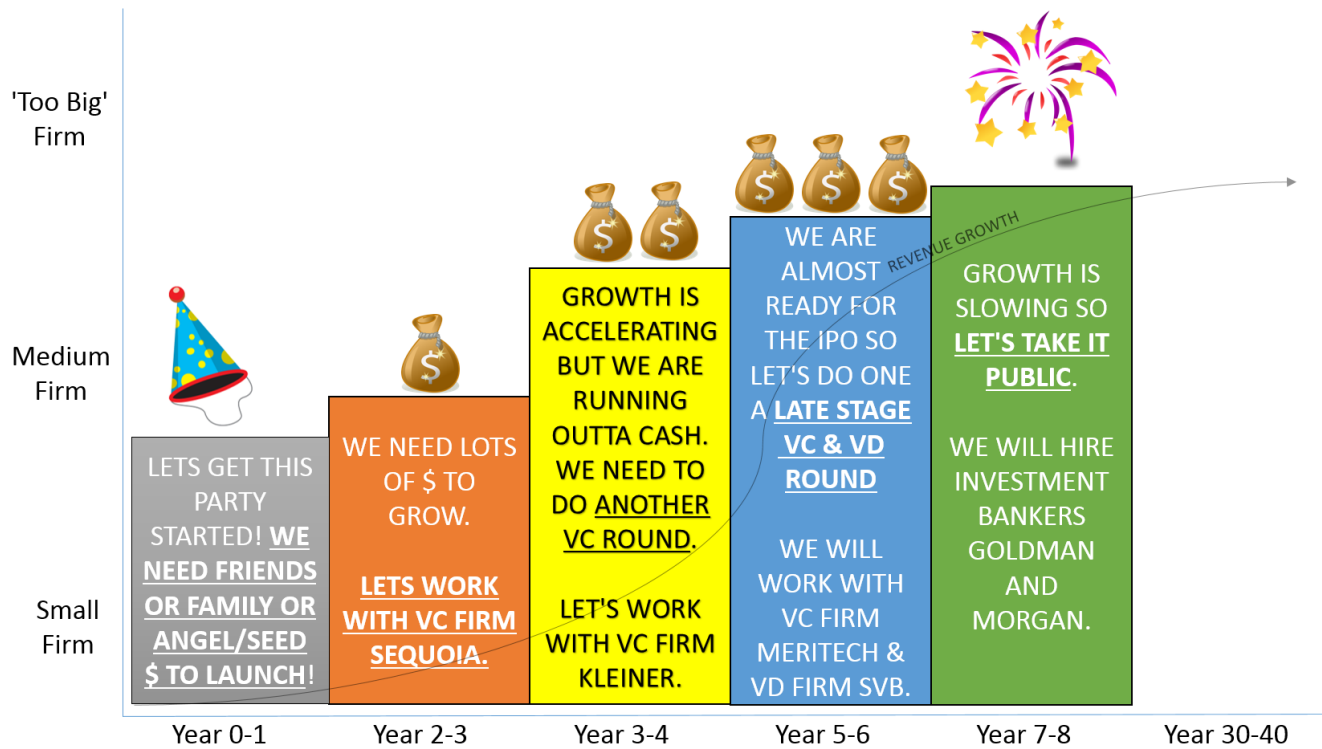


CHAPTER 12: INITIAL PUBLIC OFFERING AND VALUATION

“The New York Stock Exchange is the only store in the world where consumers sell stuff when it goes on sale.”

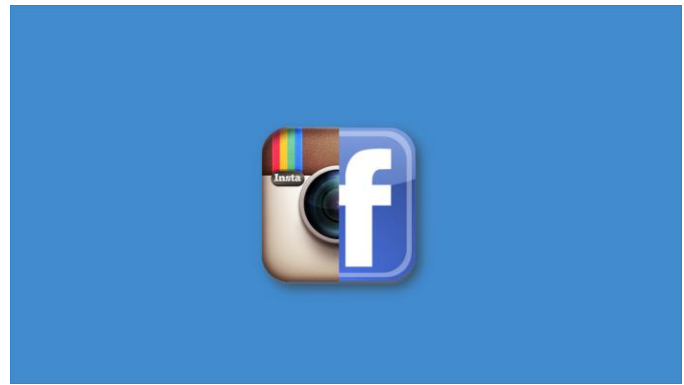
- Warren Buffett





Microsoft offered us \$1bn in cash to buy our company! Screw that though cuz we is worth way more than that!

Before we talk about how Goldman Sachs is going to take our firm public, let's try to understand tech valuations through a quick case study on Facebook's purchase of Instagram:



Before we jump in, let's see what Mark Zuckerberg has to say about the acquisition: www.tiny.cc/chris87

kmarks
 My eBay Sold
 VB VentureBeat | Tech. ...
 Engadget
 Qu Welcome to the Qui...
 Qu Projects - Quid Web
 TC Tech

HOME
SEARCH
The New York Times

ROBOTICA EPISODE 4
A Talking Teddy Bear
Practicing in the Pediatric
Hospital

Yahoo Wins Rights to Live
Stream Bills-Jaguars N.F.L.
Game
Showtime to Introduce Net Streaming
Service on July 12

DealB%k

WITH FOUNDER
ANDREW ROSS SORKIN

MERGERS & ACQUISITIONS | INVESTMENT BANKING | PRIVATE EQUITY | HEDGE FUNDS | I.P.O./OFFERING

Facebook Buys Instagram for \$1 Billion

By EVELYN M. RUSLI APRIL 9, 2012 1:15 PM 36 Comments

2:02 p.m. | Updated

Facebook is not waiting for its initial public offering to make its first big purchase.

In its largest acquisition to date, the social network has purchased Instagram, the popular photo-sharing application, for about \$1 billion in cash and stock, the company said Monday.

Keith Bedford/Bloomberg
NewsKevin Systrom, chief

\$1bn for Instagram which had no revenue is a HUGE bargain when Facebook bought them in 2012! Why?

2011 instagram users of 1mn
and over 100mn in 2012!

facebook market cap
/
facebook users ("subs")
=
value per sub

\$231,000,000 (then)
/
1,400,000,000
=
\$165 per subscriber!

instagram acquisition price
/
instagram subs
=
value per sub

\$1,000,000,000
/
100,000,000 (in 2012)
=
\$10 per subscriber!

Facebook only paid \$10 per
subscriber versus its own
valuation of much much higher
per Facebook subscriber!

\$1,000,000,000
/
300,000,000+ (today)
=
<\$5 per subscriber!

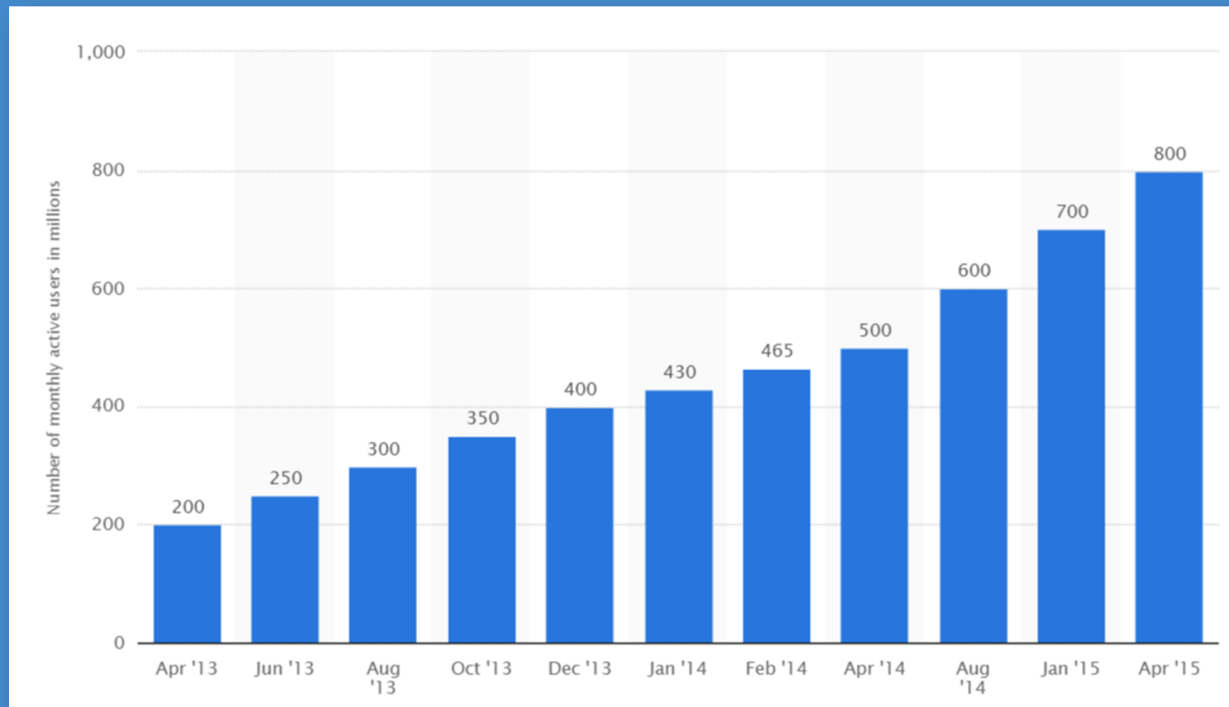
if facebook was valued at \$165
per subscriber....

...and assuming instagram is
worth at least \$80 per sub...

\$80 per sub times 200m subs=
\$16bn+ valuation for instagram
today!

instagram is worth \$16bn-\$32bn

That \$1bn acquisition was very acretive per sub acquired for Facebook. Check out Instagram's user growth:

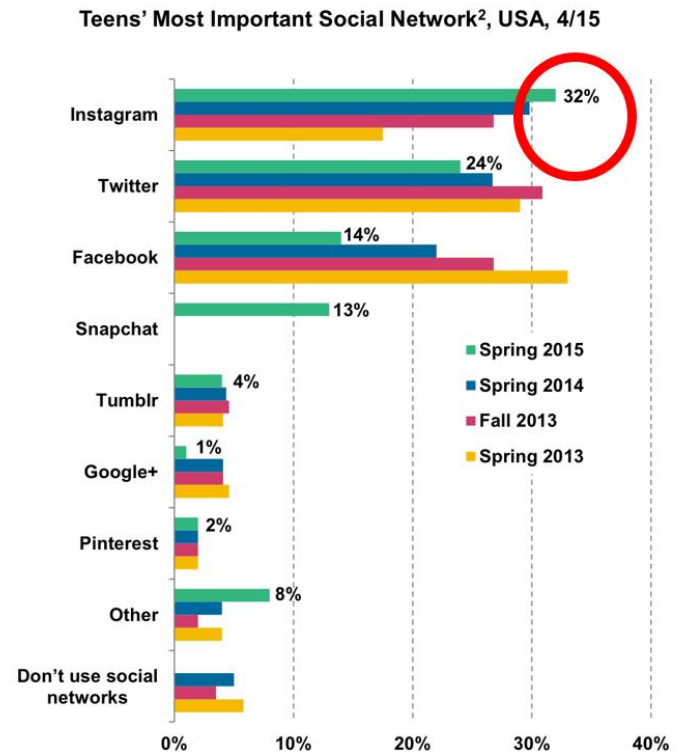
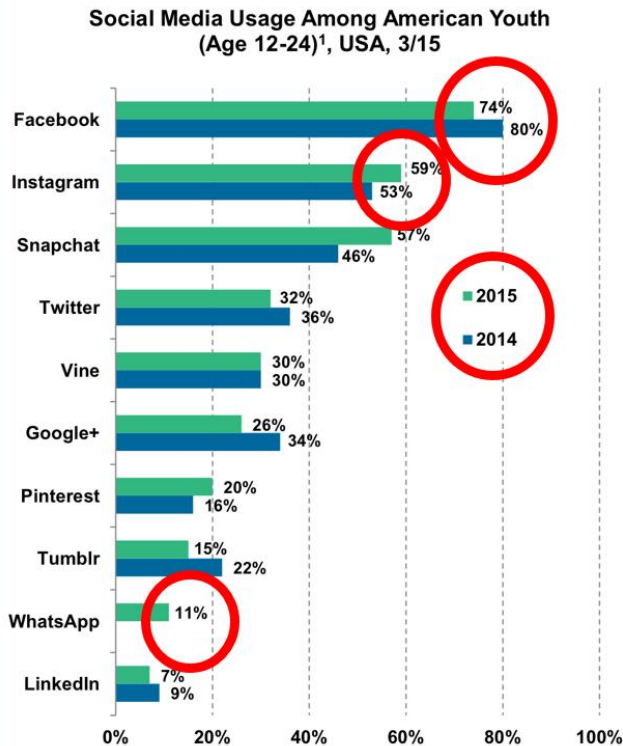


ok i get it. valuation for high growth
consumer tech is based on subs.
what did facebook pay for what's
app?

~\$20bn

Facebook had to buy Instagram and they had to buy Sequoia backed WhatsApp as Facebook's growth is decelerating. Facebook is much less relevant to younger demographics.

12-24 Year Olds Internet Usage = Visual Stuff (In & Out) Rules... Instagram + Snapchat + Pinterest = Continue to Rise



@KPCB

Source: Edison Research / Triton Digital, Piper Jaffray.

Note: (1) 12-24 year olds who currently ever use social networking sites/services. (2) Based on survey of US teens with an average age of 16.3 years.

68

~\$20bn/700mn subs
= \$28 per sub!

Facebook got another bargain by paying only \$28 per subscriber for WhatsApp. This deal was "accretive" to Facebook's value per subscriber.

valuation methodologies
differ based on the industry

Valuing companies in the short term always differs based on the sector that the company competes in. In consumer technology, we look at the value per subscriber.

VALUATION DRIVERS

short term valuation drivers:

- ❑ consumer tech = subs
- ❑ enterprise tech = revenue
- ❑ semis tech = earnings
- ❑ hotels = revpar

short term valuation drivers:

- ❑ industrials = earnings & volume
- ❑ telco = arpu
- ❑ retail = earnings & SSS
- ❑ biotech = FDA approval

The hotel industry's valuation driver is "REVPAR" which stands for Revenue Per Available Room. In the telco market we look at "ARPU" which stands for Average Revenue Per User. In biotech we look at the probability a company will get FDA approval, which is why investing in biotech stocks is like a binary event at times. In the retail sector, we look at "SSS" which stands for Same Store Sales as we only care about the growth of each individual store on a YoY or year over year basis. This is why investors loved it when McDonald's started serving food 24 hours a day or when McDonald's started selling high margin coffee beverages.

long term valuation drivers:

- ❑ tech and telco = earnings & cf
- ❑ financials = earnings & cf
- ❑ retail = earnings & cf
- ❑ all sectors = earnings & cf

In the long run all we care about from a valuation perspective in all industries is earnings and cash flow.

additional valuation methods.

we are in late 2019 now.

our private company's
valuation

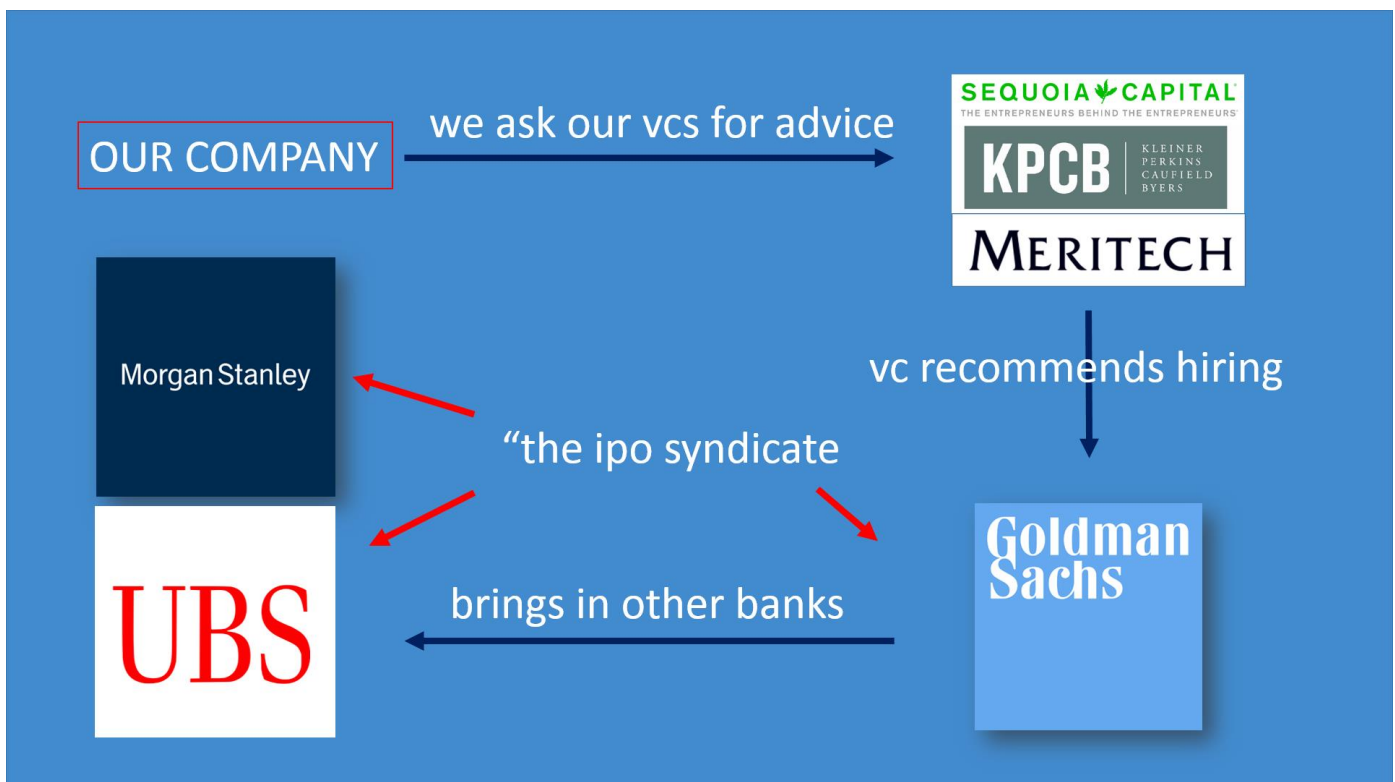
we turned down microsoft's
'insulting' \$1bn acquisition offer.

go big or go home!

let's put a dent in the universe.

we want to go public now.

Let's take the plunge! Let's go public!!!!!!



We will ask our awesome VC investors Sequoia, Kleiner and Meritech who we should select for our initial public offering (IPO). They all tell us to go with Goldman Sachs as they are the best company when it comes to helping technology firms go public. Goldman puts together a group of investment banks to work with for the IPO, which is called the IPO syndicate. They do this as our IPO is going to be massive and Goldman wants to spread the risk by partnering with and sharing the economics with several firms. We also want to decide whoever does the best job of all the investment banks in the syndicate who to compensate a bit more so than the others. Competition is always good for us, the consumer.

we just hired goldman sachs
for the IPO

what do the employees at
goldman do for our private firm?

explain the anatomy of an ipo

investment bankers “underwrite” the IPO
(legal documents, excel valuation etc)

goldman
Sachs

Investment bankers work with lawyers and create all the legal documents required to take us public. They list all of the risks as well in the legal filings so that our investors can’t sue us or Goldman if something goes wrong.

Recall when we went to www.sec.gov when we were building our model we used the 10-k (the annual report) to analyze the company we were modeling. At the same website we can search for an “S-1” which is legal filing code for the IPO document that contains everything investors need to know about our firm in order to make an intelligent decision on whether or not to buy our stock in the IPO!

Here is the actual S-1 filing for Facebook’s IPO: www.tiny.cc/chris88 . You can see that Morgan Stanley is listed first so they led the IPO for Facebook.



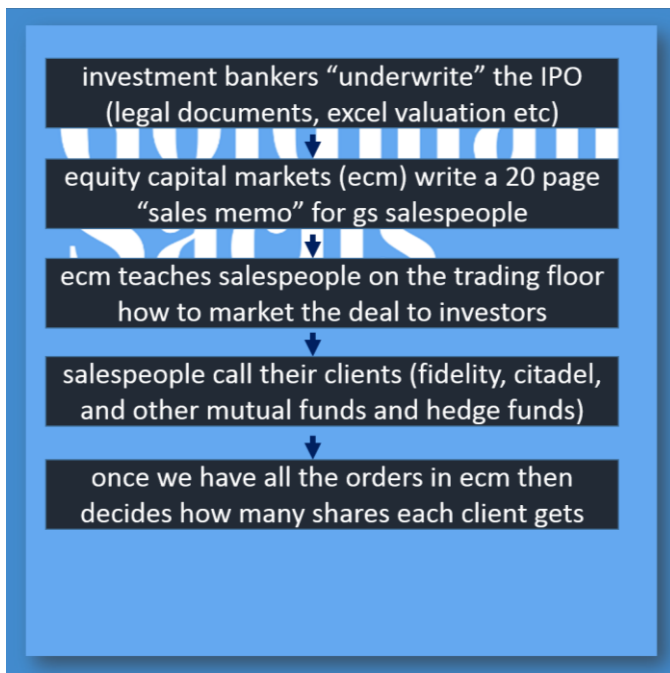
Goldman's investment bankers work with our management team and advise us on how to go public and when to go public and who to sell our shares to. At Goldman there is a team called ECM or Equity Capital Markets that summarize the lengthy S-1 that the bankers created into a few pages called the Sales Memo.



ECM then teaches the salesforce at Goldman how to sell the company going public to their clients. The Goldman salesforce works on the Goldman trading floor beside Goldman's army of traders. ECM tells the Salesforce what the risks are with the investment in our company as well as the positive selling points.



Then the Goldman salesforce calls their customers and market the deal to their mutual fund and hedge fund clients (their clients manage billions of dollars in retirement savings, pension fund money, endowment money and rich people's money etc.).



The Goldman salesforce then collects all the orders for the IPO from their customers and articulates the orders to ECM. The larger customers like Fidelity or T.Rowe or Citadel get larger allocations as they pay Goldman more via trading commissions over time. Some companies going public tell the salespeople at Goldman that they only want to participate if the price is low. Others say they don't care about the price and they will buy a large chunk of the IPO with little pricing sensitivity.

Customers know that a deal is hot if they don't get the amount of shares that they ask for. When I used to work at a prominent hedge fund, if a salesperson during an IPO process called me to tell me that I should be happy that I got allocated exactly what I

asked for in a deal, then I would be worried as this basically signals that demand for the IPO was anemic (watch out for signals)!

ECM and the company going public ultimately get to decide which clients get which allocations. Management of the company going public usually wants the potential shareholders that they met with that have the best understanding of the business model in the long run to receive large allocations. Why?

Because they are less likely to be tourists in the stock and panic if it goes down and sell it. Goldman will help the company understand which shareholders stick around in IPOs in the long run and which firms 'flip' or quickly sell previous IPOs. Since companies that buy stocks have to file their long position holdings every 3 months or so, it is quite easy to track this information online.



Then the traders on the Goldman trading floor distribute the shares to customers like Fidelity and the Goldman salespeople call their customers to inform them what their allocation was. Then 30 days later the Goldman equity research analyst can initiate coverage on the company with a Buy, Hold or Sell rating which is dependent of course on the valuation of the underlying company at the point of initiation.

after the process is done,
goldman wires the ipo proceeds
to us (less fees)

oh no.....

goldman tells us that a few
mutual funds need to see a dcf
which ecm wants to put in their
ipo sales memo for the
salesforce.

ugh.
fine. but many investors
prefer p/e or p/s
we will take an average p/e,
p/s and dcf for our valuation

so many indep variables in dcf
is problem.

There are so many independent variables when calculating a DCF, which is an issue. If I told you that $X+1=3$, of course you know that X is 2. If I told you that $X+T+Y+Q=3$, then you have no idea what X is! The same can be said for DCF as there are so many independent variables like the WACC, the Terminal Value etc.

after dcf done we triangulate
p/e and p/s and get average.

dcf is pretty easy...as our
company's net income is very
close to cash flows anyway.

lets do a dcf for our firm

dcf is the value of all future
cash flows discounted

we need to look at the cf from
years 2020-2025

but first we need to calculate
the wacc

$$\begin{aligned} \text{wacc} = \\ & \text{cost of equity} \\ & + \\ & \text{cost of debt} \end{aligned}$$

We have no debt so there is no need to account for the cost of debt in our DCF.

$$\begin{aligned} \text{wacc} = \\ & \text{cost of equity} \\ & + \\ & \text{cost of debt} \end{aligned}$$

$$\begin{aligned} \text{cost of equity} = \\ & \text{risk free rate} \\ & + \\ & (\text{stock market return} - \text{risk free rate}) \\ & * \\ & \text{beta (how volatile our company is)} \end{aligned}$$

$$\begin{aligned} \text{cost of equity} = \\ & 1\% \\ & + \\ & (12\% - 1\%) \\ & * \\ & \text{beta (how volatile our company is)} \end{aligned}$$

what is our beta?

For some reason, the investment bankers think that our beta should be similar to storage company betas as there is a storage element to our product. Fine. We will take the average beta of a few storage companies and that is the beta we will use in our wacc when calculating our DCF valuation.

LNKD: Summary for Link... x

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wdc Look Up

WDC Western Digital Corporation Equity - NASDAQ

WDC150717C001C WDC Jul 2015 call 105.000 Option - OPR

WDC150717P000E WDC Jul 2015 put 95.000 Option - OPR

WDC.AX WESTFIELD STAPLED Equity - Australian

WDC150619P000E WDC Jun 2015 put 98.000 Option - OPR

WDC.F WESTERN DIGITAL Equity - Frankfurt

WDC.MX WESTERN DIGITAL Equity - Mexico

WDC170120C000E WDC Jan 2017 call 55.000 Option - OPR

WDC150619C001C WDC Jun 2015 call 100.000 Option - OPR

WDC150717C001C WDC Jul 2015 call 100.000 Option - OPR

Show all results for wdc

Tip: Use comma (,) to separate multiple quotes. Learn more...

Company Events Message Boards Market Pulse

COMPANY Profile Key Statistics SEC Filings Competitors Industry Components

ANALYST COVERAGE

Waiting for finance.yahoo.com...

Ask: 213.99 x 200 Avg Vol (3m): 1,995,990

1y Target Est: 254.74 Market Cap: 26.93B

Beta: 1.11 P/E (ttm): N/A

Earnings Date: Jul 29 - Aug 3 (Est.) EPS (ttm): -0.37

Div & Yield: N/A (N/A)

Quotes delayed, except where indicated otherwise. Currency in USD.

Headlines

LinkedIn Corporation Class A Co

LNKD Jun 5, 4:00pm EDT

217

216

215

214

213

212

10am 12pm 2pm 4pm

1d 5d 1m 3m 6m 1y 2y 5y

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Real-time

11:25 AM 6/6/2015

WDC: Summary for West... x

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Sat, Jun 6, 2015, 2:25PM EDT - U.S. Markets closed Report an Issue

Dow +0.31% Nasdaq +0.18%

More On WDC

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Summary Order Book Options Historical Prices

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Headlines Press Releases Company Events Message Boards Market Pulse

COMPANY

Profile Key Statistics SEC Filings Competitors Industry Components

ANALYST COVERAGE

Analyst Opinion

Western Digital Corporation (WDC) - NasdaqGS

94.87 +0.53 (0.56%) Jun 5, 4:00PM EDT

After Hours : 94.82 +0.05 (0.06%) Jun 5, 4:57PM EDT

Prev Close: 95.40 Day's Range: 94.27 - 95.58

Open: 95.40 52wk Range: 82.85 - 114.69

Bid: 89.50 x 100 Volume: 1,051,534

Ask: 99.75 x 100 Avg Vol (3m): 2,018,720

1y Target Est: 113.10 Market Cap: 21.91B

Beta: 1.42 P/E (ttm): 14.52

Earnings Date: Jul 28 - Aug 3 (Est.) EPS (ttm): 6.54

Div & Yield: 2.00 (2.10%)

Quotes delayed, except where indicated otherwise. Currency in USD.

Headlines

Western Digital-SanDisk Now Makes More Sense at Barrons.com (Fri, May 29)

Western Digital Corporation

WDC Jun 5, 3:59pm EDT

95.5

95.0

94.5

94.0

10am 12pm 2pm 4pm

1d 5d 1m 3m 6m 1y 2y 5y max

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11:25 AM 6/6/2015

WDC: Summary for Western Digital

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Quotes delayed, except where indicated otherwise. Currency in USD.

Headlines

- Western Digital-SanDisk Now Makes More Sense at Barrons.com (Fri, May 29)
- [video]Western Digital Shares Jump Following Goldman Sachs Upgrade at TheStreet (Thu, May 28)
- Western Digital Shares Jump Following Goldman Sachs Upgrade at TheStreet (Thu, May 28)
- Goldman Sachs upgrades behind S&P 500's top gainers at MarketWatch (Thu, May 28)
- Jim Cramer -- Seagate Technology, Western Digital Shares Are Going to Fly at TheStreet (Thu, May 28)
- Cramer's Mad Dash: These stocks are going to fly CNBC (Thu, May 28)
- WD Redesigns World's No. 1 Selling Portable Hard Drive PR Newswire (Wed, May 27)
- Western Digital Under Pressure at TheStreet (Tue, May 26)
- Western Digital to Participate in Investor Event PR Newswire (Thu, May 21)
- Mariko Gordon Sells Lumber Liquidators, Western Digital Gurfocus (Tue, May 19)
- Plex Media Server Now Available On WD'S My Cloud NAS Series PR Newswire (Tue, May 19)
- WESTERN DIGITAL CORP Financials EDGAR Online Financials (Sat, May 16)
- 10-Q for Western Digital Corp. Company Spotlight (Thu, May 14)
- Stocks too hot to handle? CNBC (Thu, May 14)
- WD® Drives Solutions And Rewards With Enhanced myWD™ Channel Partner Program PR Newswire (Thu, May 14)

» More Headlines for WDC

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Trade Now Select your broker

Compare Brokers

Comparison

Symbol	% Chg	Mkt Cap
WDC	↓0.56%	21.91B
EMC	↑1.22%	53.10B
STX	↓0.20%	17.28B
TOSBF	↓0.55%	N/A

» More Competitors

Key Statistics

Forward P/E (1 yr):	11.60
P/S (ttm):	1.47
Ex-Dividend Date:	30-Jun-15

» More Key Statistics

STX: Summary for Seagate Technology

finance.yahoo.com/q?s=STX

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Enter Symbol Look Up Sat, Jun 6, 2015, 2:25PM EDT - U.S. Markets closed Report an Issue

Dow ↑0.31% Nasdaq ↑0.18%

More On STX

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COMPANY

Profile Key Statistics SEC Filings Competitors Industry Components

ANALYST COVERAGE

Analyst Opinion

Seagate Technology Public Limited Company (STX) - NasdaqGS

54.43 +0.11(0.20%) Jun 5, 4:00PM EDT

After Hours: 54.50 ↑0.07 (0.13%) Jun 5, 5:12PM EDT

Prev Close: 54.54 Day's Range: 53.78 - 54.54

Open: 54.24 52wk Range: 50.44 - 69.40

Bid: 50.05 x 100 Volume: 2,500,999

Ask: N/A Avg Vol (3m): 3,347,440

1y Target Est: 64.32 Market Cap: 17.28B

Beta: P/E (ttm): 9.45

Earnings Date: Jul 15 - Jul 20 (Est.) EPS (ttm): 5.76

Div & Yield: 2.16 (3.90%)

Quotes delayed, except where indicated otherwise. Currency in USD.

Headlines

- Being a Clever Investor Isn't Always Smart at Kiplinger (Tue, Jun 2)

New from Yahoo Finance

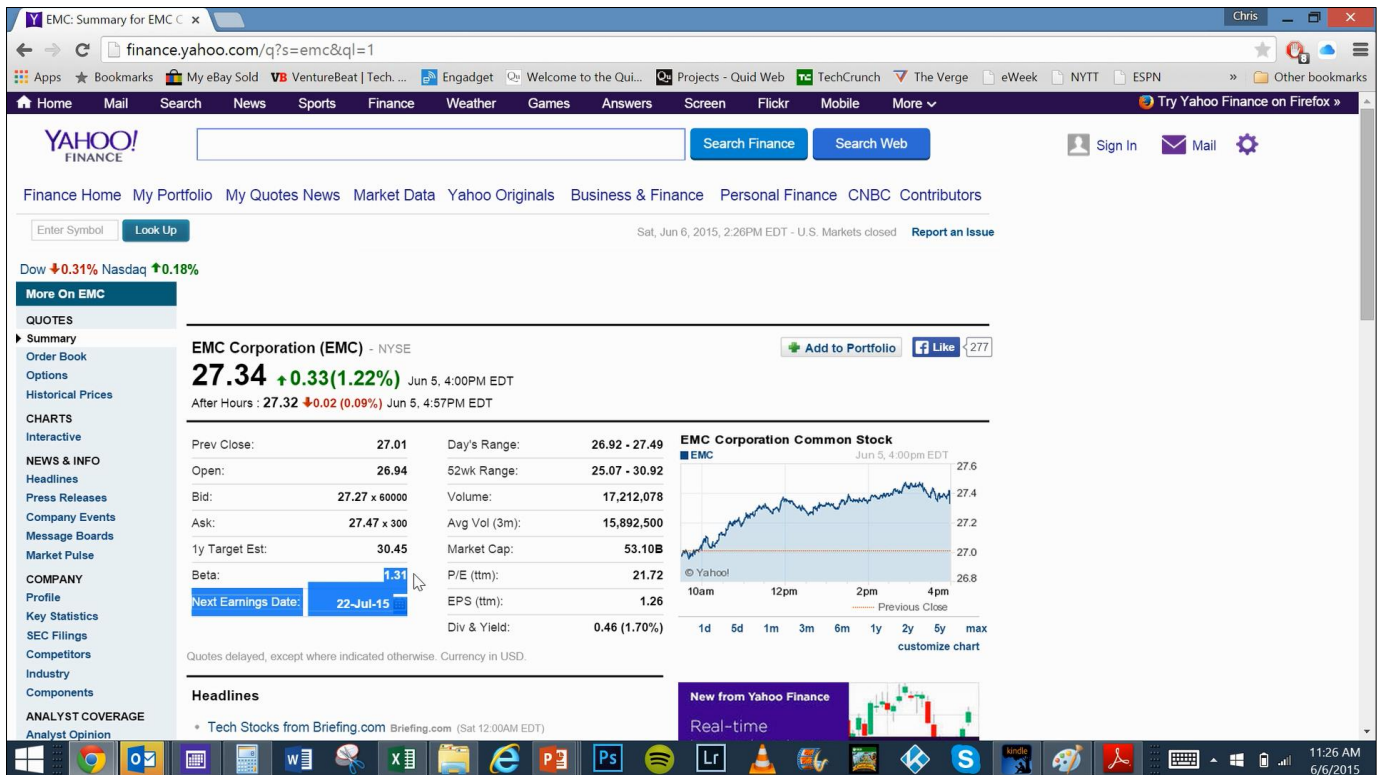
Real-time interactive charts. View full chart

Seagate Technology. STX Jun 5, 3:59pm EDT

10am 12pm 2pm 4pm

1d 5d 1m 3m 6m 1y 2y 5y max

customize chart



Ok. We calculated the average beta of companies that the bankers think are similar to us....the average beta is 1.57.

$$\begin{aligned} \text{cost of equity} = & \\ & 1\% \\ & + \\ & (12\% - 1\%) \\ & * \\ & 1.57666666666667 \end{aligned}$$

Our beta ends up being way above 1 which makes sense as we are a newer and riskier and likely more volatile stock, unlike Microsoft, which has a beta of under 1.

$$\begin{aligned} \text{cost of equity} = & \\ & 18.34\% \end{aligned}$$

Notice that our cost of capital or wacc is about twice as high as Microsoft's. This is the case as we are a much riskier investment. As a result, we need to discount our future net income or cash flow using a much higher interest rate. This will result in a lower valuation than if we used Microsoft's interest rate. Again, this makes a lot of sense as we are a much riskier investment than stable Microsoft (MSFT) is.

We decided to use the ticker 'BLUE' for our firm as we are huge fans of Will Ferrell.

we use 18.34% as
our discount rate = "r"

$$\begin{aligned} \text{dcf} = & \\ & \text{cf}_{2020}/(1+r)^1 + \\ & \text{cf}_{2021}/(1+r)^2 + \\ & \text{cf}_{2022}/(1+r)^3 + \\ & \text{cf}_{2023}/(1+r)^4 + \\ & (\text{cf}_{2024} + \text{tv})/(1+r)^5 \end{aligned}$$

$\text{tv} = \text{cf}_{2024} / (r - g)$

assume g is our long term g
terminology: r-g is called the
cap rate

$$\begin{aligned} \text{dcf} = & \\ & \text{cf}_{2020}/(1+r)^1 + \\ & \text{cf}_{2021}/(1+r)^2 + \\ & \text{cf}_{2022}/(1+r)^3 + \\ & \text{cf}_{2023}/(1+r)^4 + \\ & (\text{cf}_{2024} + \text{cf}_{2024} / (r - g))/(1+r)^5 \end{aligned}$$

	2015	2016	2017	2018	2019	2020	2021	2022	
Revenue	\$ 2,000,000	\$ 20,000,000	\$ 350,000,000	\$ 661,500,000	\$ 999,600,000	\$ 1,399,440,000	\$ 1,889,244,000	\$ 2,066,360,625	\$ 1,948,280,000
% YoY		900%	1650%	89%	51%	40%	35%	9%	
COGS	\$ 1,800,000	\$ 16,000,000	\$ 175,000,000	\$ 264,600,000	\$ 299,880,000	\$ 279,888,000	\$ 358,956,360	\$ 371,944,913	\$ 331,200,000
GM pct	10%	20%	50%	60%	70%	80%	81%	82%	
Gross Profit	\$ 200,000	\$ 4,000,000	\$ 175,000,000	\$ 396,900,000	\$ 699,720,000	\$ 1,119,552,000	\$ 1,530,287,640	\$ 1,694,415,713	\$ 1,617,080,000
Operating Expenses:									
S&M	\$ 500,000	\$ 4,000,000	\$ 66,500,000	\$ 112,455,000	\$ 159,936,000	\$ 209,916,000	\$ 264,494,160	\$ 268,626,881	\$ 233,790,000
% of sales	25%	20%	19%	17%	16%	15%	14%	13%	
% YoY		700%	1563%	69%	42%	31%	26%	2%	
G&A	\$ 500,000	\$ 4,000,000	\$ 66,500,000	\$ 112,455,000	\$ 159,936,000	\$ 209,916,000	\$ 264,494,160	\$ 268,626,881	\$ 233,790,000
% of sales	25%	20%	19%	17%	16%	15%	14%	13%	
% YoY		700%	1563%	69%	42%	31%	26%	2%	
R&D	\$ 4,000,000	\$ 20,000,000	\$ 25,000,000	\$ 25,000,000	\$ 40,000,000	\$ 35,000,000	\$ 35,000,000	\$ 35,000,000	\$ 35,000,000
% of sales	200%	100%	7%	4%	4%	3%	2%	2%	
% YoY		400%	25%	0%	60%	-13%	0%	0%	
Opex Total	\$ 5,000,000	\$ 28,000,000	\$ 158,000,000	\$ 249,910,000	\$ 359,872,000	\$ 454,832,000	\$ 563,988,320	\$ 572,253,763	\$ 502,580,000
Operating Profit (EBIT)	\$ (4,800,000)	\$ (24,000,000)	\$ 17,000,000	\$ 146,990,000	\$ 339,848,000	\$ 664,720,000	\$ 966,299,320	\$ 1,122,161,950	\$ 1,114,480,000
% of sales	-240%	-120%	5%	22%	34%	47%	51%	54%	
Interest	\$ -	\$ -	\$ 85,000	\$ 734,950	\$ 1,699,240	\$ 9,970,800	\$ 14,494,490	\$ 16,832,429	\$ 16,710,000
Tax	\$ -	\$ -	\$ 4,250,000	\$ 36,747,500	\$ 84,962,000	\$ 166,180,000	\$ 241,574,830	\$ 280,540,488	\$ 278,620,000
% of EBIT	0%	0%	25%	25%	25%	25%	25%	25%	
Net Income	\$ (4,800,000)	\$ (24,000,000)	\$ 12,835,000	\$ 110,977,450	\$ 256,585,240	\$ 508,510,800	\$ 739,218,980	\$ 858,453,892	\$ 852,580,000
% of sales	-240%	-120%	4%	17%	26%	36%	39%	42%	
% YoY		400%	-153%	765%	131%	98%	45%	16%	
assumptions and revenue drivers pro forma income statement analysis ratios ipo valuation + ⌵ ⌶									

=I27/(1+0.1834)^1									
	B	C	D	E	F	G	H	I	J
1			2015	2016	2017	2018	2019	2020	2021
27		Net Income	\$ (4,800,000)	\$(24,000,000)	\$ 12,835,000	\$110,977,450	\$256,585,240	\$ 508,510,800	\$ 739,218,980
28		% of sales	-240%	-120%	4%	17%	26%	36%	39%
29		% YoY		400%	-153%	765%	131%	98%	45%
30									
31							dcf each year=	=I27/(1+0.1834)^1	

H	I	J	K	L	M	N
2019	2020	2021	2022	2023	2024	
\$256,585,240	\$ 508,510,800	\$ 739,218,980	\$ 858,453,892	\$ 852,582,476	\$ 943,499,096	
26%	36%	39%	42%	44%	46%	
131%	98%	45%	16%	-1%	11%	
dcf each year=	\$ 429,703,228	\$ 527,849,336	\$ 517,991,077	\$ 434,720,521	=M27/(1+0.1834)^5	

=M27/(0.1834-0.05)									
	C	D	E	F	G	H	I	J	K
		2015	2016	2017	2018	2019	2020	2021	
	Net Income	\$ (4,800,000)	\$(24,000,000)	\$ 12,835,000	\$110,977,450	\$256,585,240	\$ 508,510,800	\$ 739,218,980	\$ 858,453,892
	% of sales	-240%	-120%	4%	17%	26%	36%	39%	
	% YoY		400%	-153%	765%	131%	98%	45%	
						dcf each year=	\$ 429,703,228	\$ 527,849,336	\$ 517,991,077
						tv=	=M27/(0.1834-0.05)		

=I33/(1+0.1834)^5								
B	C	D	E	F	G	H	I	J
		2015	2016	2017	2018	2019	2020	
	Net Income	\$ (4,800,000)	\$(24,000,000)	\$ 12,835,000	\$110,977,450	\$256,585,240	\$ 508,510,800	\$ 739,218,980
	% of sales	-240%	-120%	4%	17%	26%	36%	
	% YoY		400%	-153%	765%	131%	98%	
						dcf each year=	\$ 429,703,228	\$ 527,849,336
						tv=	\$ 7,072,706,867	
						discount tv	=I33/(1+0.1834)^5	

	H	I	J	K	L	M
2018	2019	2020	2021	2022	2023	2024
\$7,450	\$256,585,240	\$ 508,510,800	\$ 739,218,980	\$ 858,453,892	\$ 852,582,476	\$ 943,499,096
17%	26%	36%	39%	42%	44%	46%
765%	131%	98%	45%	16%	-1%	11%
dcf each year=	\$ 429,703,228	\$ 527,849,336	\$ 517,991,077	\$ 434,720,521	\$ 406,511,635	
tv=	\$ 7,072,706,867					
discount tv	\$ 3,047,388,569					
fcf=	=I34+sum(I31:M31					
	SUM(number1, [number2], ...)					

	H	I	J	K	L	M
2018	2019	2020	2021	2022	2023	2024
\$7,450	\$256,585,240	\$ 508,510,800	\$ 739,218,980	\$ 858,453,892	\$ 852,582,476	\$ 943,499,096
17%	26%	36%	39%	42%	44%	46%
765%	131%	98%	45%	16%	-1%	11%
dcf each year=	\$ 429,703,228	\$ 527,849,336	\$ 517,991,077	\$ 434,720,521	\$ 406,511,635	
tv=	\$ 7,072,706,867					
discount tv	\$ 3,047,388,569					
fcf=	\$ 5,364,174,366					
	seems logical....but let's compare it to our other valuation methodologies fr					

Our DCF valuation tells us that our company should be worth \$5.4bn. Hmm ok let's compare this to what our P/Revenue and P/E valuation targets are.

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[illegible][illegible]

our goldman bankers think
the company is worth
\$8.15bn

but IPOs are priced at a discount....

gs wants to look good and
wants a 30% pop on day 1!

$$\$8.15\text{bn} * 0.70 = \$5.7\text{bn}$$

is there an easier way to
do dcf?

npv formula in excel.

H	I	J	K	L	M
2019	2020	2021	2022	2023	2024
\$ 256,585,240	\$ 508,510,800	\$ 739,218,980	\$ 858,453,892	\$ 852,582,476	\$ 943,499,096
26%	36%	39%	42%	44%	46%
131%	98%	45%	16%	-1%	11%
dcf each year=	\$ 429,703,228	\$ 527,849,336	\$ 517,991,077	\$ 434,720,521	\$ 406,521,635
tv=	\$ 7,072,706,867				
discount tv	\$ 3,047,388,569				
dfcf=	\$ 5,364,174,366				
seems logical....but let's compare it to our other valuation methodologies from last class.					
=npv(0.1834,I27:M27					
NPV(rate, value1, [value2], [value3], ...)					

We covered this before, but it is worth revisiting.

	H	I	J	K	L	M	
8	2019	2020	2021	2022	2023	2024	
9	\$ 256,585,240	\$ 508,510,800	\$ 739,218,980	\$ 858,453,892	\$ 852,582,476	\$ 943,499,096	
6	26%	36%	39%	42%	44%	46%	
6	131%	98%	45%	16%	-1%	11%	
	dcf each year=	\$ 429,703,228	\$ 527,849,336	\$ 517,991,077	\$ 434,720,521	\$ 406,521,635	
	tv=	\$ 7,072,706,867					
	discount tv	\$ 3,047,388,569					
	dfcf=	\$ 5,364,174,366					
	seems logical....but let's compare it to our other valuation methodologies from last class.						
		+					
	\$ 5,364,174,366.17						

adding complexity to our dcf
deduct non cash items like
depreciation.
deduct dividends from cf etc.

how do we look at comps?
a comp for our firm is nmb
see sec.gov

Comps means comparative or similar companies. We need to look at them so we can make sure that the financial statements we have prepared are not dramatically different. Looks like there is a company Called Nimble Storage, which Sequoia invested in before with an amazing management team and investment syndicate. We can look at Nimble's financials to see if we are thinking about modeling our company the right way. As always, we get this information from www.sec.gov

← → C www.sec.gov/Archives/edgar/data/1452751/000119312513403444/d563804ds1.htm	
Apps ★ Bookmarks My eBay Sold VB VentureBeat Tech... Engadget Welcome to the Qui... Projects - Quid Web TechCrunch The Verge eWee	
S-1 1 d563804ds1.htm S-1	
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As filed with the Securities and Exchange Commission on October 18, 2013	
UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, DC 20549	
FORM S-1 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933	
NIMBLE STORAGE, INC.	

www.sec.gov/Archives/edgar/data/1452751/000119312513403444/d563804ds1.htm#toc563804_22

Chris

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Total stockholders' (deficit) equity	(29,741)	(53,662)	(69,256)	29,324
Total liabilities, redeemable convertible preferred stock and stockholders' (deficit) equity	\$ 37,420	\$ 72,563	\$ 70,545	\$ 70,545

See notes to consolidated financial statements.

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Nimble Storage, Inc.
Consolidated Statements of Operations
(in thousands, except per share data)

	Year Ended January 31,			Six Months Ended July 31,	
	2011	2012	2013	2012 (unaudited)	2013
Revenue:					
Product	\$ 1,632	\$ 13,113	\$ 49,765	\$ 17,731	\$ 45,766
Support and service	49	900	4,075	1,378	4,838
Total revenue	1,681	14,013	53,840	19,109	50,602
Cost of revenue:					
Product	604	5,233	17,266	6,073	15,375
Support and service	230	1,045	3,184	995	3,466
Total cost of revenue	834	6,278	20,450	7,068	18,841
Gross profit	847	7,735	33,390	12,041	31,761
Operating expenses:					
Research and development	4,415	7,903	16,135	6,714	14,376
Sales and marketing	2,934	12,863	39,851	13,868	31,428
General and administrative	325	3,756	5,168	1,999	5,342
Total operating expenses	7,674	24,522	61,154	22,581	51,146
Loss from operations	(6,827)	(16,787)	(27,764)	(10,540)	(19,385)
Interest income	5	6	32	12	22
Other expense, net	—	(4)	(26)	(28)	(295)
Loss before provision for income taxes	(6,822)	(16,785)	(27,758)	(10,556)	(19,658)
Provision for income taxes	—	5	99	12	176
Net loss	(6,822)	(16,790)	(27,857)	(10,568)	(19,834)
Accretion of redeemable convertible preferred stock	(16)	(23)	(34)	(14)	(21)
Net loss attributable to common stockholders	\$ (6,838)	\$ (16,813)	\$ (27,891)	\$ (10,582)	\$ (19,855)
Net loss per share attributable to common stockholders, basic and diluted	\$ (0.47)	\$ (1.04)	\$ (1.53)	\$ (0.60)	\$ (0.98)

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www.sec.gov/Archives/edgar/data/1452751/000119312513403444/d563804ds1.htm#toc563804_4

Chris

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Working capital	29,787
Total assets	37,420
Deferred revenue, current and non-current	2,028
Redeemable convertible preferred stock	57,921
Total stockholders' deficit	(29,741)

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lots of detail on sec.gov

S1 = IPO filing document

but there is a lot more...

www.sec.gov is an amazing resource. We find S1 IPO filing documents there as well as annual reports (called 10-k's), quarterly reports (called 10-q's) and press releases that companies much disclose (called 8-k's). The beautiful thing about being an individual investor is that we all now have the exact same access to information that the Fidelity's of the world have as well (and at the exact same) time!

Questions Based on Chapter 12:

1: Investment banks usually price IPOs at a discount to what they believe the fair value is of the underlying company.

True or False

2: The NPV formula makes calculating a DCF much easier.

True or False

3: A company with a high beta is less risky and less volatile than a company with a low beta.

True or False

CHAPTER SUMMARY



Chris Haroun @chris_haroun

short term valuation methodologies differ by sector. in the very long run it is all about earnings and cash flow. triangulate different valuation methodologies for IPOs.

